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LOGISTICS SUPPORT TO  
FUTURE UNIFIED COMMANDERS

BY

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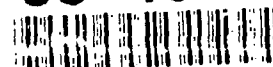
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LOGISTICS SUPPORT TO FUTURE UNIFIED COMMANDERS

AN INDIVIDUAL STUDY PROJECT

by

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## ABSTRACT

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Desert Storm logistics illustrated the increasing complexity of modern warfare. This study focuses on several logistical lessons of Operation Desert Shield/Desert Storm, similar to those experienced in past wars. The current U.S. strategy demands a U.S. based, crisis response force that can achieve a quick, relatively bloodless victory, worldwide. An emphasis on a rapid response capability, over extended lines of communication (LOCs), places greater weight on logistical considerations. Force sustainment will become significantly more challenging as deployments lengthen. Analyzed in this study are three major aspects of warfighting logistics: movement, supply of materiel and maintenance. Also discussed is the concept of creating a single DoD logistical support organization. Named the Joint Logistics Support Command, (JLSC) it could directly support the combatant commander's Joint Logistics Command (JLC). Basically, this proposal merges USTRANSCOM, DLA and the currently proposed depot maintenance consolidation organization - the Defense Maintenance Command (DMC), into one command, the JLSC. The author argues that a combatant commander cannot afford the inefficiencies of entangled and ineffective Service and perhaps coalition logistical umbilical cords. Needed is a single integrated joint logistics support command.

## INTRODUCTION

...history repeats itself war after war,  
giving the world story after story of muddled  
preparations...War has become a business.  
...Like commercial activities, it is  
susceptible of analysis...to estimate  
necessities required to meet the situation,  
and to avoid duplication and waste.

Lieutenant Colonel  
George C. Thorpe, USMC  
Pure Logistics, 1917<sup>1</sup>

Historically war has been an expensive, blunt, and at times, fragile political tool for furthering national political interests. Past battlefield victories and defeats most often have resulted from a complex interaction of military and logistical capabilities. When these wars are analyzed by students and historians, in retrospect, only then do their outcomes appear obvious.

This paper focuses on several logistical lessons of Operation Desert Shield/Desert Storm, similar to those experienced in past wars. It concludes by discussing a concept for reorganizing DoD's logistical infrastructure to better support the nation's service members in future engagements.

A combination of well trained and motivated coalition forces and their competent leadership achieved the Desert Storm victory. However, as then Army Chief of Staff, General Carl E. Vuono, stated, "Logistics was the essential element in maintaining the

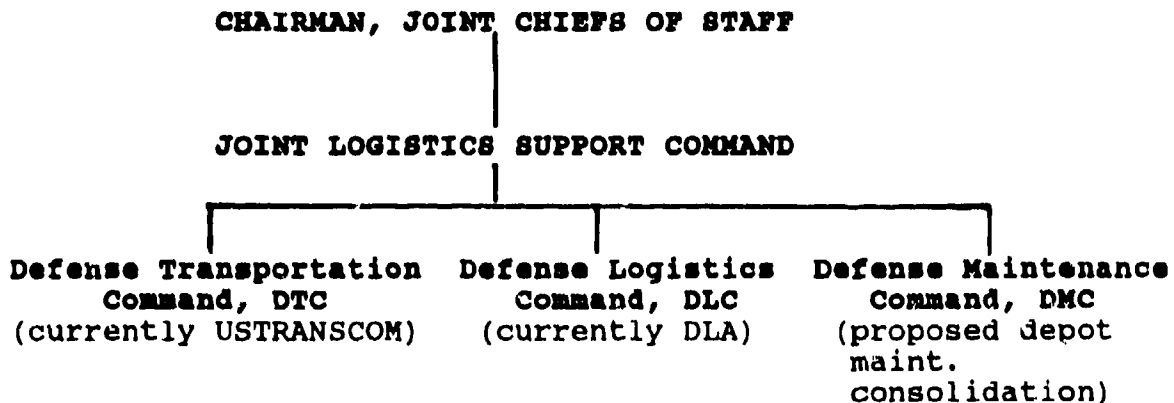
speed and momentum of the attack that defeated the Iraqi Army in 100 hours of intensive fighting."<sup>2</sup>

The current U.S. strategy demands a United States based, crisis response force that can achieve a quick, relatively bloodless victory, worldwide. An emphasis on a rapid response capability, over extended lines of communication (LOCs), versus a forward deployed presence, places greater weight on logistical considerations. Force sustainment can become significantly more challenging as deployments lengthen.

Desert Storm logistics illustrated the increasing complexity of modern warfare. More troops and equipment were landed in the first thirty days of Desert Shield, than during the initial phases of World War II, Korea and Vietnam.<sup>3</sup> Both troops and equipment were sustained by lines of communication that stretched over 6,000 air miles and 13,000 sea miles from the United States to Saudi Arabia.

Current logistics doctrine holds Services responsible for supporting their deployed forces unless otherwise directed. Combatant commanders may direct a particular service component, to take responsibility for providing or coordinating supplies or services for all service components in their area of responsibility (AOR).<sup>4</sup> Presently, joint logistics doctrine further states that a single theater command authority should be responsible for logistics - a Joint Logistics Command (JLC). This was done in Desert Storm with the establishment of the 22D Theater Support Command (SUPCOM).<sup>5</sup>

This paper suggests creation of a single DoD integrated logistical support command, called here the Joint Logistics Support Command, (JLSC). The JLSC could directly support the combatant commander's Joint Logistics Command (JLC). Basically, this proposal merges USTRANSCOM, DLA and the currently proposed depot maintenance consolidation organization - the Defense Maintenance Command (DMC), into one command, the JLSC. USTRANSCOM could become the Defense Transportation Command (DTC) and DLA could become the Defense Logistics Command (DLC). The parent headquarters, JLSC, could provide unified and combatant commanders logistical support and report to the Chairman of the Joint Chiefs of Staff.



The basis for this proposal is presented below by analyzing three major aspects of warfighting logistics: movement, supply of materiel and maintenance. The organization of the proposed Joint Logistics Support Command and the pros and cons of centralizing logistics support will then be discussed in more detail.



## MOVEMENT

The Nation's capability to deliver logistic resources has historically been a major limiting factor in military operations.

Doctrine for Logistic Support  
of Joint Operations,  
September 1992<sup>6</sup>

Successful force projection depends on a capability to support operations, at the end of long lines of communication. The enemy will probably not be burdened with the same disadvantage.<sup>7</sup> James A. Houston in his book, The Sinews of War: Army Logistics from 1775-1953, analyzed logistical problems that resulted from shortages of equipment or supplies in wars from the Revolution to Korea. He writes, that these problems have most often "been the result of some shortage in transportation, somewhere along the line."<sup>8</sup> Shipment of supplies during Desert Storm highlighted several related areas that are discussed below: the adequacy of strategic lift, the timeliness, prioritization and accountability of supplies, and the security of air and sea lines of communications (ALOCs and SLOCs).

In its first combat test, the newly formed U.S. Transportation Command, (USTRANSCOM) marshalled an impressive array of land and sea transportation to support the War. However, as General Ross, Commanding General of the Army's Materiel Command has stated, Desert Storm also pointed out the critical need of contingency forces for more airlift and sealift.<sup>9</sup>

The U.S.'s ongoing reduction in forward deployed forces

places an even greater emphasis on the importance of the question of how future strategic lift will be accomplished? This perennial question now arises at a time when the capabilities of the U.S.'s commercial maritime and airline industries are seriously eroding.<sup>10</sup> Additionally, post-Desert Storm initiatives to augment airlift capability with the purchase of C-17s is increasingly jeopardized by contractor cost and schedule overruns and declining defense budgets.

Historically, the Services have been unable to match force requirements with strategic lift capabilities. Airlift and sealift shortfalls seem to go unresolved only to reappear during the next deployment. Service parochialism and the lack of inter-Service cooperation has often been blamed for this inability to provide Army soldiers and equipment sufficient Navy and Air Force lift capability when needed.

Timeliness and sufficiency of troop movement and supply is vital to battlefield success. Future personnel, supply and equipment pipelines must efficiently and flexibly adapt to the dynamics of warfighting by quickly shifting and leveling scarce resources between U.S. and perhaps coalition forces. U.S. and coalition forces in Desert Storm had over six months to build an adequate logistical base for springing an attack on Iraq. It is unlikely that the next conflict will provide U.S. forces the luxuries of either time or the modern air and sea port facilities available in Saudi Arabia.

During Desert Storm the need to expedite delivery of

critical supplies prompted creation of virtually an overnight air express delivery service to Dhahran. Named "Desert Express," it delivered critical Service needs into theater.<sup>11</sup> The institutionalization of this capability has obvious advantages in future conflicts. However, the major issue of providing adequate personnel and supply lift for the balance of requirements argues for centralized management, from installation or factory to foxhole. One organization could better optimize the allocation of transport, with personnel and supply shipments, consistent with the operation plan (OPLAN) priorities of all unified commanders.

Typical of the kind of benefit derived from centralized control is evident in USTRANSCOM's solution for transporting more supplies and equipment faster by using containerization. Extensive containerization of supplies by depots and vendors in Desert Shield/Desert Storm reduced overall transportation costs and increased other economies and efficiencies. USTRANSCOM, unsuccessfully promoted the use of containerization for ammunition and unit equipment as well. They argued that containerization could not only free up space on ships for transport of vehicles but could also free up military terminals for unit deployments. Most container shipments embarked from commercial port facilities. Containerization could allow for the deployment of more units simultaneously. USTRANSCOM claims that three times as much can be shipped by container ships than by the present use of breakbulk ships.<sup>12</sup>

Army officials have been critical of containerization as discussed in the next section of this paper on supply of materiel. Regardless, the problems identified are not insurmountable and one organization controlling both supply and transport could both champion and remedy this more effective approach.

Another aspect of movement is the security of sea and air lines of communication (SLOCs and ALOCs). The relative security of Desert Storm SLOCs and ALOCs greatly assisted in the uninterrupted movement of a tremendous volume of materiel into the theater. Future engagements may not be as secure due to the increased precision and enhanced lethality of smart munitions. Opposing forces can now make "surgical" strikes throughout the depth of the battlefield and beyond. When facing an enemy, with equivalent weapon technology, and shorter LOCs, the speed and sufficiency of logistical support could be the U.S.'s only competitive edge. Improvements can be made by increasing the speed of resupply, the effective use of Host Nation Support (HNS) and local contracting. These efficiencies are discussed in the next section.

In the future, U.S. forces may be deployed and sustained for indefinite periods of time. The security, adequacy and efficiency of strategic lift capabilities are key to the success of the U.S.'s national military strategy. Improving these capabilities will require a reassessment of current logistics policies and organizations. Reorganization into one command,

like the JLSC, may be the most effective use of scarce resources.

### SUPPLY OF MATERIEL

Commodities were managed and distributed through the "brute force" approach employing mass quantities and herculean transportation efforts. Focused management of critical commodities was nearly impossible and inventory control was a nightmare.<sup>13</sup>

Col. Douglas W. Craft on  
supplying Desert Storm  
August 1992

Warfare using high technology weapon systems requires vast amounts of fuels, ammunition and spares delivered in increasingly compressed time frames. Colonel Craft, quoted above, was the Chief Plans Division, for U.S. Central Command (CENTCOM) during Desert Storm. Regrettably, Colonel Craft's description of supplying Desert Storm is similar to accounts for supplying the Korean and Vietnam Wars. In both previous wars, there were significant problems with port congestion, prioritizing shipments, routing, accountability, visibility and control of the high volume of supplies and equipment.<sup>14</sup>

U.S. defense industries surged production providing massive amounts of both basic and exotic warfighting needs to Desert Storm. The Defense General Supply Center (DGSC) in Richmond, Virginia, increased purchases of sandbags from a peacetime demand of 4 million to 68 million.<sup>15</sup> Between August 1990 to March 1991,

the requirement for Meals Ready to Eat (MREs) grew from 4.2 million to 14.4 million a month. The Defense Electronic Supply Center (DESC) in Columbus, Ohio, processed over 250,000 orders for electronic parts requisitioned from U.S. and coalition forces to Desert Storm.

Enormous quantities of materiel were shipped to Defense depots for containerization and shipment to ports of debarkation. The Defense Depot in Ogden, Utah, assembled, stocked, and shipped the equivalent of three complete hospitals into 120 containers and MILVANS known as Deployable Medical Systems, DEPMEDS.<sup>16</sup>

Unfortunately, the containerization of supplies created problems of accountability, visibility and handling. Most containers were opened on arrival in Saudi Arabia to identify their contents. The sheer volume of supplies made this an overwhelming task, caused port congestion, security risks, and most importantly delayed critical supplies to combat units.<sup>17</sup>

Containerized supplies were within physical reach of some units that needed them. Yet, their lack of visibility resulted in units reordering the same materials. This worsened port congestion and led to an ineffective use of resources.<sup>18</sup> A Desert Storm after action report by the Army's Deputy Chief of Staff for Logistics, cites that, "...the lack of requisition and asset visibility resulted in a loss of accountability for issued assets."<sup>19</sup> The Marine Corps, and to a lesser extent the Army, lost asset visibility when the decision was made not to flow support personnel into theater. Only the Air Force maintained

any semblance of asset control through their automated control system.<sup>20</sup>

LTG Tuttle, former Commanding General of the Army Materiel Command (AMC), suggested the need for a system providing oversight of the accountability, movement and timeliness of supplies.<sup>21</sup> Toward this end, the Department of Defense plans to provide future combat commanders and logisticians a "seamless asset tracking system."<sup>22</sup> Operation of this system will likely reside at the Office of the Secretary of Defense (OSD) level or perhaps be given to USTRANSCOM.

Currently, USTRANSCOM serves as implementing agency for the Joint Operation Planning and Execution System (JOPEs), and as a conduit for JOPEs user inputs.<sup>23</sup> Merging the two systems together, under the operational control of one organization, the proposed DTC, could assist timely, effective decision making at all levels.

Further streamlining is also being accomplished in controlling supplies. In April 1990, former Secretary of Defense, Dick Cheney, directed that the distribution functions of the 30 supply depots of the Armed Forces and DLA be consolidated under DLA management. This consolidation will permit the Defense Department more efficient positioning of stock, to develop a single automated system, consolidate transportation functions and facilities, and reduce administrative costs. Depot consolidation is scheduled for June 1993. DLA will then have responsibility for managing a single, unified military supply distribution

system.<sup>24</sup> Tying DLA's new centralized supply depot system to the DoD seamless asset tracking system, mentioned previously, can provide an overarching automated control of supplies and equipment to the wartime theater. The DLC (now DLA) and DTC (now USTRANSCOM) subcommands of the proposed JLSC could effectively integrate these two functions.

Prioritization of supply distribution in Desert Storm was also a problem, as it was in Vietnam. Depots were overwhelmed with high priority requisitions in both wars. Requisitions were filled on a first-come-first-served basis rather than based on the urgency of warfighting needs. After Desert Storm, General Accounting Office auditors were told by military officials that the high priority code was used for most in country requisitions, further crippling the proper distribution of spares and supplies.<sup>25</sup>

Continued U.S. Foreign Military Sales (FMS) to coalition partners will further complicate the prioritized distribution of critical parts in future coalition efforts. Prior sales of U.S. weapons to Desert Storm allies resulted in a significant increase in FMS requests during the War. These foreign customers were attempting to overcome planning and stockage shortfalls in their own military forces, as we were. In just the first six months of the War, FMS requests for Saudi Arabia, Bahrain, Egypt, Oman, and the United Arab Emirates, were in excess of \$12 Billion.<sup>26</sup> This competition for U.S. spares poses a critical problem to future combatant commanders in ensuring the optimal warfighting distri-



bution of critical parts to U.S. and coalition forces.

Army General, Carter B. Magruder, in his assessment of Army logistical problems from World War II through Vietnam, recommended the creation of a single "monitoring agency" to edit and prioritize requisitions.<sup>27</sup> Present automation and satellite communication capabilities make a real-time, total asset visibility network a plausible solution and the proposed JLSC an appropriate monitoring agency.

The Theater Joint Logistics Command (JLC) commander, who best understands the combatant commander's intent, must be singularly responsible for ensuring resources are appropriately allocated, when and where necessary. The JLSC could provide the JLC commander with an organizational cell data-linked to the JLSC, DTC defense asset tracking system. This cell could provide the JLC commander with the on-site administrative support to monitor and edit requisitions and implement the combatant commander's priorities of distribution. Deployed at the onset of hostilities, it could manage all common and Service specific support items.<sup>28</sup>

Host Nation Support (HNS) and local contracting are potentially critical areas for supporting future combatant commanders. Martin van Creveld in his book, Supplying War, chronicles warfare's historical transition from armies living off the land, to modern armies dependent on continuous replenishment from bases. Logically, such dependency brings with it security and efficiency problems.

Desert Storm's 22D Support Command determined logistical support requirements by offsetting doctrinal combat service support usage factors with the resources available through Host Nation Support (HNS) or local contracting. Any short-falls in supplies were then requisitioned through normal supply channels.

Logistical support would have been significantly more difficult and risky had Saudi Arabia not provided an ideal, modern, logistical infrastructure and considerable HNS.<sup>29</sup> HNS and local contracting proved critical in supporting deployed forces in Desert Storm and will probably be more important in sustaining future engagements.

Col. Dan Bartlett headed the 22D Support Command's contracting element that provided local contracting support. He reported that future deployments should have a preconfigured element of contracting officers to perform local contracting support rather than the ad hoc manner in which one was formed for Desert Storm.<sup>30</sup>

Innovative local contracting reduces security risks and time-consuming shipments over extended lines of communication. Freed up shipment pallets can then ship other priority supplies from CONUS, that are not available in local markets. Local contracting also reduces transportation costs and can fill critical requirements for items not currently available in the supply system.<sup>31</sup>

The importance of local contracting is demonstrated by the problems experienced by DLA's Defense Fuel Supply Centers (DFSC)

during Desert Storm. Ironically, although fuel, in such an oil rich area should not be a problem, it posed significant challenges. The DFSC's in-country units awarded more than 100 petroleum supply and related service contracts to commercial suppliers and also negotiated with host nations for another 45 million barrels of petroleum.

Col. John J. Johnson, Director of DFSC's Supply Operations, during Desert Storm, stated that coalition operations would have been seriously jeopardized had DFSC not had a Middle Eastern organization already in place, before hostilities. They controlled the literally billions of gallons of fuel that were required. Even with an existing infrastructure there were problems:

The Saudis had unlimited petroleum - crude oil - to refine. The problem was being able to get the refined products to the user.<sup>32</sup>

This problem resulted in "numerous incidences of almost running out of fuel," and was only resolved by the timely local contracting for fill stands, commercial trucks and local drivers.<sup>33</sup>

Many similar examples exist that stress the importance of institutionalizing a formal joint organizational contracting capability. It would seem impractical to suggest that future unified commanders maintain an organic capability for this largely wartime mission. A JLSC could maintain a deployable unit

augmenting combatant JLC commanders with an element staffed from DLA organizations. This unit could provide local contract support and also coordinate host nation and coalition support.

Another potential problem in future engagements is the availability and control of spare parts. Many observers of the Gulf War believe the coalition's technological superiority to Iraqi forces was critical in both the success of the coalition forces and in foreshortening the War. The military writer, Martin van Creveld argues that modern technical complexity brings greater chance for failure. Modern forces, he believes, are theoretically less efficient than were eighteenth-century armies based on the law of diminishing returns.<sup>34</sup> The law postulates that: "...the friction within any machine...increases in proportion to the number of its parts."<sup>35</sup>

Although, high-technology weapons worked superbly in the Gulf War, the conflict was too short to adequately validate their reliability and maintainability. A protracted conflict may well have crippled the U.S.'s ability to meet its need for spares.

General Heiser, in his historical overview of U.S. Army logistics in past wars, calls sustainability the Army's "achilles heel."<sup>36</sup> GAO has reported that, "In a protracted conflict, sustainability of the deployed systems could be the weakest link in the logistics chain, particularly for Army systems."<sup>37</sup> LTG Pagonis, 22D Support Command's Commander, has written that the War's short duration never tested the sustainability of the U.S. supply base in Desert Storm.<sup>38</sup>

And yet, the 1992 Joint Military Net Assessment stresses that we must rely heavily on technological superiority to offset quantitative advantages of the enemy and minimize risk to U.S. Forces.<sup>39</sup> Despite DOD's stated reliance on superior technology, budget realities will likely blunt U.S. research and development efforts. Repair of existing systems rather than developing new ones, is most likely. This will increase the demand for spares and in turn stress the logistical support system. Also, the proliferation of high-tech weapons to third world countries makes the U.S.'s reliance on technological superiority questionable in future conflicts. The continued erosion of the U.S. defense industrial base and the globalization of the defense industry will create serious challenges in even maintaining and sustaining the present technological edge.

The U.S.'s success in providing logistical support to Desert Storm is no assurance of success in any similar deployment - less so if it becomes a protracted conflict. Controlling the tremendous number of potential spares in future conflicts may easily create a staggering if not overwhelming management information control problem. The volume alone demands a standard, real-time, automated information control system for tracking and routing spares. Resource management through efficient transport coupled with effective tracking and flexible distribution are key to any future success in sustaining combat forces. Centralized monitoring, editing, and prioritization of supplies and the effective use of offsets from HNS and local

contracting can greatly enhance sustainment capabilities. Augmenting a combatant commander with JLSC cells, reporting to his JLC, could provide the critical support necessary.

#### **MAINTENANCE**

In his book, After the Storm: Lessons from the Gulf War, Joseph Nye, wrote that:

One of the reasons why the United States could fly so many sorties and keep so many tanks up and running during the Gulf War was because maintenance and supply units from everywhere else were stripped of their personnel and supplies.<sup>40</sup>

He also pointed out that the U.S. would have been "sorely pressed" to fight even another "half war" somewhere else.<sup>41</sup> If only partially true, this reflects a basic vulnerability and inflexibility in the DoD's present, pre-budget-cuts, supply and maintenance support to deployed service members.

Readiness rates for aircraft and equipment, according to Air Force and Army Central Command statistics, generally ranked in the 90th percentile during Desert Storm. The General Accounting Office (GAO), reported that the Marine Corps units they visited also estimated overall readiness rates in the 90s.<sup>42</sup> During the same period, DLA claimed an 88 percent availability rate for processing the 6.8 million requisitions for items in the DLA

weapon systems support program.<sup>43</sup> At issue is whether the readiness rates support the conclusion that the supply system for spares and the maintenance system were dependable and will be adequate for future conflicts.

GAO reports seem to support Nye's assertion. They claim that readiness rates were achieved, in part, from the "ingenuity and flexibility" of supply and maintenance personnel. Service members obtained parts from other units, rebuilt and reused parts, purchased parts and repair services from the local economy, cannibalized nonmission capable equipment, and closely managed supply shipments to minimize spare part delays.<sup>44</sup>

The Office of the Army Deputy Chief of Staff for Logistics, in their Desert Storm afteraction report, conceded that though Army combat systems were well maintained, "...the Class IX [repair parts] system did not perform well."<sup>45</sup> The innovative, effective measures of service members for obtaining spares was laudable. However, it reflected the logistical support system's inability to provide parts in a timely, effective manner.

Obtaining spares for battlefield repair has historically profited from cannibalization of equipment and the reuse of parts. A DLA Defense Reutilization and Marketing Office (DRMO) was established beside a major items cannibalization point at Damman, Saudi Arabia, in November 1990. They accepted turn-ins of unserviceable and nonrepairable items and scrap. This organization also supported combat operations by coordinating with DRMOs world wide to fulfill critical shortages.<sup>46</sup> This was

the first time a DLA, DRMO was deployed to a battlefield and its success supports institutionalizing this capability in future deployments.

The third sub-command of the proposed JLSC is the Defense Maintenance Command (DMC). As part of the Pentagon's current cost-cutting initiatives, the Honorable Colin McMillan, Assistant Secretary of Defense for Production and Logistics, is proposing the consolidation of all Service depots responsible for maintaining and upgrading weapon systems - a DMC.<sup>47</sup> Combining USTRANSCOM's functions with those of DLA and the proposed DMC could consolidate and integrate the management of requisitions and the distribution of personnel, supplies, equipment and equipment repair, to more effectively support CINCs and combatant commanders.

In the Desert Storm theater, maintenance of many of the high technology weapons was performed by over 100 contractor teams involving over 1000 civilians. In some instances, the support covered all levels of maintenance from direct support to depot level support, throughout the theater.<sup>48</sup> The sophistication of today's weapons requires a major investment in training highly perishable skills. These costs make a Service organic maintenance capability almost infeasible in tactical units. Contracted civilian maintenance personnel may be a better alternative to an organic maintenance capability in units.

A single, in-theater organization could best manage and support civilian maintenance teams. If maintenance depots were



consolidated into a DMC then it would appear practical that a JLSC depot maintenance management cell attached to the JLC commander could also manage in-country maintenance civilians.

This JLSC, DMC organization could combine depot maintenance support with a civilian maintenance control cell and use the integrated capabilities of the defense asset visibility network and the DRMO/cannibalization activities for obtaining spares.

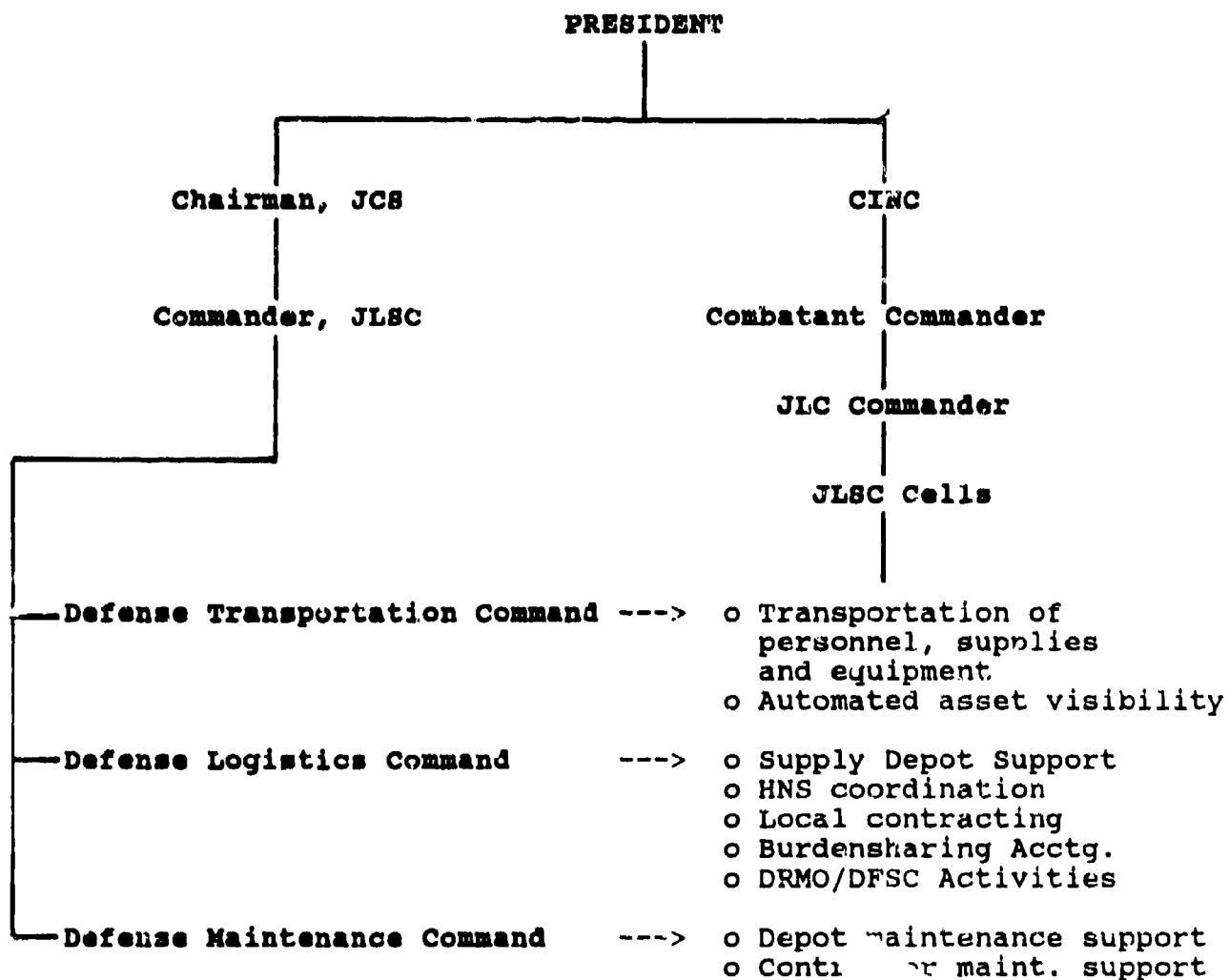
#### **THE JOINT LOGISTICS SUPPORT COMMAND (JLSC)**

History and likely future realities argue for a radical change in the U.S.'s defense logistics management. A centralized logistics approach merits consideration.

The JLSC could combine several logistical functions of the Services (i.e. acquisition, storage, movement, theater sustainment and depot maintenance). As stated earlier, this joint command, could be formed by merging DLA, USTRANSCOM and the proposed consolidated depot maintenance organization.<sup>49</sup> It could coordinate logistical support to all unified commands and provide the combatant commander with a single logistics interface to his Joint Logistic Command (JLC).

A single, integrated automated system controlled by JLSC could track requisitions and supplies from production to the user. The JLSC could deploy and staff both prefabricated supply

and maintenance depots to a combatant commander's AOR, and could additionally manage theater cannibalization and Defense Reutilization and Marketing Organization operations. Additionally, they could provide a logistic cell(s) to the JLC commander to interface with other JLSC activities, coordinate Host Nation Support, perform local contracting activities, and possibly provide cost accounting of burdensharing among coalition partners.



Services should retain responsibility for recruitment, training, doctrine, and for research and development (R&D) of new weapons and equipment. Services could identify and fund their requirements for supplies and services to the JLSC which could contract for them. In times of conflict, the JLSC through their Defense Plant Representative Offices (DPROs) and Defense Contract Management Areas of Operation (DCMAOs) could expedite the delivery of critically needed items. They could also assist in reducing production lead times, and increase visibility of critical repair parts inventories.<sup>50</sup>

The critical item lists (CILs) of unified commanders have historically focused on weapon systems and combat support items. They would be more effective if they also considered essential Troop Support items that could become warstoppers (e.g. combat rations, clothing and equipage, and medical supplies).<sup>51</sup> The JLSC, working closely with unified command staffs could evaluate supportability of CINC operation plans (OPLANS) tracking critical items back to the production base.

Where necessary, the DLC could establish or coordinate with Services to ensure the availability of wartime supplies by establishing service-type contracts. Service-type contracts require a prime contractor and subcontractors to maintain an ability to supply a product, but they do not require delivery of the product. Use of a service-type contract is often a lower cost solution than actually purchasing a product for which the Armed Forces has no peacetime need. Service-type contracts

allowed DLA to supply nerve agent antidote autoinjectors in time to meet Desert Storm demands. If the base had disappeared, it would have taken 24 months and \$40 million to restore.<sup>52</sup>

The need to maintain a viable, responsive production base for critical items seems self-evident, yet one of DLA's published lessons learned reads:

If Operation Desert Shield had commenced six months later, the capability of the industrial base to support critical troop items would have been greatly diminished from its present capability [due to planned budget cuts].<sup>53</sup>

The JLSC could use both the present Joint Operation Planning and Execution System (JOPES), and the planned Defense seamless asset tracking system as a base to build on. These two systems could form a fully integrated joint supply requisition and accountability system responsive to wartime needs. The combatant JLC commander could have total asset visibility and a capability to prioritize, shift and level resources to optimize battlefield distribution. Edit routines could monitor the flow of requisitions and flag predetermined out of tolerance situations. Ideally the system could expand for use by coalition forces to capture costs of coalition burdensharing agreements. Services and unified commands could use the system in both war and peace highlighting shortfalls in the production base where service-type contracts might be appropriate. As stated previously, the JLSC could have the DTC (now USTRANSCOM) manage this network.

In a downsized DoD, the JLSC's span of control could be managed through automation, barcoding wands, microprocessor cargo identification, instantaneous communication, and wireless modems. It has been suggested that we look to the United Parcel System and Federal Express as possible models of efficient operations for shipment, control and accountability.<sup>54</sup> If implemented, this JLSC concept could optimize logistical support to unified and combatant commanders.

### THE CASE AGAINST CENTRALIZED LOGISTICS

The idea of centralizing logistics into a "fourth service" is not a new one. Over thirty years ago, RADM Henry E. Eccles, USN (Ret.) argued against centralization. He believed that a "huge enterprise" could not be managed efficiently because of the massive amounts of data to be collected, processed and evaluated. Management decision-making, he felt, would be "sluggish".<sup>55</sup>

Any move toward centralizing Service functions into DoD is generally resisted by the Services. Angered over the loss of direct control and parts of their budgets to outside organizations, Services believe the bureaucracies of centralized organizations are less responsive to their needs. The perception exists that central defense organizations operate in a relatively independent and hostile manner. Allegedly, there is "ambiguity and diffusion in [their] oversight...and accountability."<sup>56</sup>

The Services believe that they must retain their own in house capabilities to ensure combat readiness.<sup>57</sup> There is a perception that a centralized organization (far from the battlefield) may make economically motivated decisions, inadvertently at the expense of service member's lives. LTG Pagonis contended that, by their nature, military logistical systems "intentionally sacrifice some measure of efficiency to maintain a higher margin of safety."<sup>58</sup> A centralized organization may remove this safety margin through an ill-considered efficiency initiative.

#### **THE CASE FOR CENTRALIZED LOGISTICS**

Both USTRANSCOM, DLA and now the proposed Defense Maintenance Command are highly visible examples of a clear trend since World War II to wrest resources from the military services and centralize control in the growing DoD Secretariat and joint activities.<sup>59</sup> Prior to World War II, the Services were largely responsible for their own supplies. The subsequent massive war buildup led to numerous inefficient and uneconomical purchases. A partial remedy gave the Army responsibility for purchasing all DoD foodstuffs and the Navy responsibility for purchasing all DoD petroleum. After the war other commodities were distributed to the Services under this "single-manager" concept.<sup>60</sup>

Former Secretary of Defense, Robert McNamara, believed that

further economies and efficiencies could be achieved by creating a single integrated materiel logistics organization for common support to the Services. Toward this end he created the Defense Supply Agency in 1962 (renamed in 1977 the Defense Logistics Agency).<sup>61</sup> Since September 1992, DLA has been procuring 93 percent of all the consumable items used by the military forces.

Centralization is touted as achieving economies by reducing redundancies, and by streamlining and consolidating functions, organizations and facilities. Advocates contend that centralization allows for: increased efficiencies and effectiveness through standardization, improved controls through integration, and simplification through the elimination of bureaucratic barriers.

Some centralization proponents argue that the Services resist any change involving centralization of Service functions, regardless of its correctness. They claim Services fear that any such initiative will start them down a slippery slope toward a single unified Service.<sup>62</sup>

Steep budget cuts and an austere future will erode and impair Service capabilities. Current U.S. military strategy requires a timely, CONUS-based, crisis response that achieves a quick, relatively bloodless victory. Successfully supporting the complicated logistical demands of this strategy with DoD's current logistical structures is doubtful. The successful warfighter on a dynamic, complex battlefield cannot afford the inefficiencies of entangled and ineffective Service umbilical

ords. He needs the single integrated support of a Joint Logistics Support Command.

### CONCLUSION

It is a fundamental truth that we learn all our major lessons from war. That's a costly way to learn, but it certainly makes a lasting impression on those doing the learning.

LTG Charles McCausland,  
former Commander,  
Defense Logistics Agency  
November, 1991<sup>63</sup>

The U.S.'s current military strategy and the Nation's political and economic situation, favors a single centralized DoD logistics command that could support the unified commander both in peacetime and in war. The increasing complexity of logistics and the greater confusion of a combined or coalition battlefield will only worsen matters. It is unlikely that Services can fund solutions to their logistical problems, in the foreseeable future. Thus a combined, centralized approach can afford an effective and economical alternative to individual Services trying to correct similar problems.

The Services tend to absorb budget cuts in reducing their support infrastructures, munitions and spare parts rather than in the big ticket items such as: tanks and airplanes.<sup>64</sup> A separate organization could better articulate and keep visibility on the



more mundane, yet no less important, logistical requirements of the battlefield. A single organization pursuing funding for an integrated program is more likely to survive, Office of the Secretary of Defense, and congressional reviews, than individual Service attempts for funding. What the individual Services could perhaps not achieve independently a JLSC could champion for mutual gain.

In summary, the historical trend toward jointness and centralization makes centralized logistics almost inevitable. A centrally controlled, integrated, automated approach can optimize logistical support to U.S. Forces and more readily expand to meet the needs of coalition partners.

If the U.S. is to maintain its leadership role in the World community, improvements must be made in the way it manages the business side of war - logistics. If proactive, the Army can lead in designing a responsive centralized organization more likely to achieve the objectives of the nation's military strategy. Political and economic realities make a centralized support agency probable, automation and worldwide satellite communication make it practical. The Services should champion the creation of a Joint Logistics Support Command, for the good of all.

## ENDNOTES

1. George C. Thorpe, Pure Logistics (Harrisburg: The Stackpole Co.), 3.

2. Carl E. Vuono, "Desert Storm and Future Logistics Challenges," Army Logistician (July-August 1991): 28.

3. William G. Pagonis and Jeffrey L. Cruikshank, Moving Mountains: Lessons in Leadership and Logistics from the Gulf War (Boston: Harvard Business School Press, 1992), 6.

4. U.S. Joint Chiefs of Staff, Doctrine for Logistic Support of Joint Operations, JCS PUB 4-0 (Washington: U.S. Joint Chiefs of Staff, 25 September 1992), I-4.

5. Ibid., II-6.

6. Ibid., I-1.

7. Julian Thompson, The Lifeblood of War: Logistics in Armed Conflict (New York: Brassey's, 1991), 344.

8. James A. Huston, The Sinews of War: Army Logistics 1775-1953 (Washington: Center of Military History, 1966), 669.

9. Jimmie D. Ross, "Desert Shield/Deployment Logistics Support." Army Magazine: Green Book 1990-91 (October 1990): 139.

10. U.S. Transportation Command, United States Transportation Command History: Desert Shield/Desert Storm (Scott Air Force Base: USTRANSCOM History Office, 18 May 1992) 35 and 55.

11. U.S. General Accounting Office, November 1991, Desert Shield/Storm Logistics, (Washington: U.S. General Printing Office, November 1991): 10. Transportation in-country proved more difficult and only the contracting for hundreds of commercial trucks and civilian drivers allowed for the successful distribution of in-country supplies.

12. U.S. Transportation Command, 85.

13. Douglas W. Craft, An Operational Analysis of the Persian Gulf War, (Carlisle: Strategic Studies Institute, 31 August 1992), 55.

14. Discussion of these problems in Vietnam and Desert Storm appear in General Pagonis' book, (Ibid. 48, 206). Vietnam is also discussed in General Holser's book, page 135, and in Palmer's book, Summons of the Trumpet (New York: Beladonna Books, 1984) 112-113. Terrence J. Gough mentions similar logistical problems in the Korean War, in his book, U.S. Mobilization and Logistics in the Korean War: A Research Approach, (Washington: Center of Military History United States Army, 1987) 118-119.

As proof that these problems are not solely American, by nature, former Secretary of the Navy, John Lehman, in his book, Command of the Seas, (New York: Charles Scribner and Sons, 1988) 93, writes that during the Falklands War:

The outcome of the [Falklands] battle may be seen to be a failure of Argentine logistics and a major success of British logistics. While a cache of supplies was built up after the initial invasion, the Argentine command in the Falklands was never able effectively to distribute the supplies and ammunition, and troops in the field were usually critically short of important items that were languishing close by in supply dumps.

15. George Dellinger, "DGSC's Bag Lady," Dimensions, vol. 12, number 7 (May 1991): 16.

16. R. Todd McGee, "At Defense Depot Ogden - Hospitals to go," Dimensions vol. 12, Number 3 (January 1991): 5.

17. Stephen Stomp, "High-tech support," Dimensions, Vol 12, Number 6 (April 1991): 15.

18. U.S. Defense Logistics Agency, Support of Operations Desert Shield/Desert Storm (Washington: U.S. Defense Logistics Agency, 21 May 1992), II-B-6.

19. U.S. Department of the Army, Operation Desert Storm (Washington: Office of the Deputy Chief of Staff, Logistics, no date) 101.

20. U.S. General Accounting Office, Desert Shield/Storm Logistics (Washington: General Printing Office, November 1991), 30.

21. William G.T. Tuttle, Jr., "Sustaining Army Combat Forces, Part II," Army Logistician, (November-December 1991): 15.

22. U.S. Department of Defense, Annual Report to the President and the Congress (Washington, U.S. Government Printing Office, January 1993), 41.

23. JOPES is intended "to be an integrated conventional command and control (C2) system designed primarily to satisfy the information needs of senior-level decision makers in conducting joint planning and operations." U.S. Joint Chiefs of Staff, National Defense University The Joint Staff Officer's Guide 1991 (Washington, Government Printing Office, 1991), 8-3.

24. Charles McCausland, "A Message from the Director: Looking Forward," Vol. 12, Number 10 Dimensions (October 1991): 1.

25. U.S. General Accounting Office, Desert Shield/Storm Logistics (Washington: General Printing Office, November 1991) 32.

26. U.S. Army, Operation Desert Storm Sustainment 86.

27. Carter B. Magruder, Recurring Logistic Problems: As I Have Observed Them (Washington: Center of Military History, 1991), 24.

28. U.S. Army, Operation Desert Storm Sustainment 32.

29. Norman Friedman, Desert Victory: The War for Kuwait (Annapolis, MD: Naval Institute Press, 1991), 239.

30. Bartlett, "Observations - Recommendations" memorandum for 22D Theater Support Command Commander, Desert Storm After Action Report, Baltimore, no date.

31. U.S. General Accounting Office, Desert Shield/Storm Logistics 53.

32. Kevin L. Ropp, "Extraordinary Measures: How DFSC Met the Challenge of Operations Desert Shield, Storm" Dimensions, Vol. 12, Number 10 (October 1991): 26.

33. Ibid., 26.

34. Martin van Creveld, Supplying War: Logistics from Wallenstein to Patton (New York: Cambridge University Press, 1977), 235.

34. Ibid.

36. Heiser, 238.

37. U.S. General Accounting Office, Operation Desert Storm, 4.

38. Pagonis, Moving Mountains 149.

39. 1992 Joint Military National Assessment, 2-8.

40. Joseph S. Nye, and Roger K. Smith, eds., After the Storm: Lessons from the Gulf War (New York: Madison Book: 1992), 286.

41. Ibid.

42. U.S. General Accounting Office, Desert Shield/Storm Logistics, 3.

43. Thomas R. White, "A Logistics Miracle: Cheney Presents Joint Meritorious Unit Award to DLA," Dimensions Vol. 13, Number 3 (January 1992): 3.

44. U.S. General Accounting Office, Desert Shield/Storm Logistics (Washington: General Printing Office, November 1991), 4.

45. U.S. Army, Operation Desert Storm Sustainment 51.

46. U.S. Defense Logistics Agency, Support of Operation Desert Shield/Storm, I-3.

47. "Pentagon weighs merging depots," Army Times, 14 December 1992, p. 7.

48. U.S. Army, Operation Desert Storm Sustainment, 64.

49. The Defense Logistics Agency (DLA) is a rapidly growing, multifaceted, worldwide bureaucracy of over 58,000 civilians and military personnel. A three-star flag officer commands this combat support agency, who in turn reports to the Under Secretary of Defense (Acquisition). DLA provides "worldwide logistics support to other DoD Components and certain Federal agencies, foreign governments, international organizations, and others as authorized." U.S. Department of Defense, Organization and Functions Guidebook (Washington: Office of the Secretary of Defense, February 1990) 43.

On 25 March 1991, General Colin Powell, Chairman of the Joint Chiefs of Staff praised DLA employees for providing outstanding logistical support to the Armed Forces during Operation Desert Storm. In June 1992, Secretary of Defense Cheney presented DLA with their first combat streamer and the award of the Joint Meritorious Unit Award. In his remarks he stated that the Defense Logistics Agency had accomplished a "logistics miracle" in their support of forces in the Persian Gulf. Thomas R. White, "A Logistics Miracle: Cheney presents Joint Meritorious Award to DLA," Dimensions Vol. 13, Number 3 (January 1992): 1.

USTRANSCOM is a unified command composed of the Transportation Component Commands: Military Airlift Command,

Military Sealift Command, and Military Traffic Management Command. U.S. Transportation Command, United States Transportation Command History: Desert Shield/Desert Storm (Washington: USTRANSCOM Office of History, 18 May 1992), iii.

50.U.S. General Accounting Office, Logistics Support for Desert Storm 38.

51.U.S. Defense Logistics Agency, Support of Desert Shield/Desert Storm I-C-5.

52.Ibid., I-15.

53.Ibid. II-C-1.

54.Tuttle, 15.

55.Henry E. Eccles, Logistics in the National Defense (Harrisburg: The Stackpole Co., 1959) 203.

56.Archie D. Barrett, Reappraising Defense Organization: An Analysis Based on the Defense Organization Study of 1977-1980 (Washington: National Defense University Press, 1983), 73.

57.Joseph M. Heiser, Jr., A Soldier Supporting Soldiers(Washington: Center of Military History, 1991), 236.

58.Pagonis and William G. Cruikshank, Moving Mountains: Lessons in Leadership and Logistics from the Gulf War 210.

59.Since 1948, numerous functions formerly performed by the individual Services were transferred to DoD Agencies. Examples are the Defense Intelligence Agency (DIA), Defense Communication Agency (DCA), Defense Mapping Agency (DMA), National Security Agency (NSA) and most recently the Defense Finance Accounting Services (DFAS) and the Defense Commissary Agency (DeCA). This continuing trend toward strengthening centralized DoD authority is also evident in the Goldwater-Nichols Reorganization Act of 1986 and Senator Nunn's current initiatives to combine similar Service roles and functions.

60.Ibid.

61.U.S. Defense Logistics Agency, An Introduction to the Defense Logistics Agency (Washington: Defense Logistics Agency) 1.

62.Carl W. Borklund, Men of the Pentagon: From Forrestal to McNamara (New York: Frederick A. Praeger, 1966) 122.

63. Charles McCausland, "Remarks before the Air Force Association" speech delivered before the Air Force Association, (Washington: U.S. Defense Logistics Agency, 18 November 1991): 2.

64. Friedman, 255.

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